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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

BROCHETON et al.

Serial No.: 09/707,536

Filed: November 7, 2000

Atty. File No.: 3882-906-CIP

For: "IMPROVED FILTER AID FOR  
USE IN ALLUVIATION"

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313

) Group Art Unit: 1761  
)

) Examiner: Sherrer, Curtis Edward  
)

DECLARATION  
37 C.F.R. 1.132

"EXPRESS MAIL"	MAILING	LABEL	NUMBER:
EY331292426US			
DATE OF DEPOSIT: 7/21/03			
I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE "EXPRESS MAIL POST OFFICE TO ADDRESSEE" SERVICE UNDER 37 C.F.R. 1.10 ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450.			
TYPED OR PRINTED NAME: Amy Duarte			
SIGNATURE: Amy Duarte			

Dear Sir:

The undersigned, Dr. J. HERMIA, declares as follows:

I am a member of the faculty of the Catholic University of Louvain. My curriculum vitae, detailing my experience is attached hereto as Exhibit A.

I have been asked to review certain matters and provide this Declaration which I understand is to be used by Krontec S.A., the assignee of the present application, in support of its arguments for allowability of the above-identified patent application.

I will be receiving remuneration from Krontec S.A. for my time spent in this effort at my normal consultancy rate.

I have been provided with and have read, reviewed and understand the above-identified patent application, including the specification, drawings, original claims, and claims in the form they are in after entry of the amendment being filed herewith.

I am sufficiently familiar with the state of the art of filtering devices and filter aids, both as of the present date and as of the period at least from about 1994 onward to form an opinion as to the knowledge of those of skill in the art, at the time that the invention was made.

I base my conclusion on, at least, the following facts.

I am of the opinion that the claimed invention exhibits substantially improved results that are new and unexpected as compared to the prior art. In particular, the comparative data establishes that the claimed invention provides improvements in the observed performance characteristics of the filter aid that are greater than expected. For example, as shown in Tables 1 and 2 of the patent application specification, the specific resistance of filter cakes formed with the claimed filter aid is very much lower than that of prior art filter aids. The extent of the improvement over the prior art provided by the filter aid of the present invention is unexpected, because it was not previously recognized that the use of angular particles having distributed sizes would result in improved results as compared to the prior art.

Because of the lower specific resistance it provides, a filter aid in accordance with the present invention exhibits a smaller increase in pressure in the filter and smaller growth of the filter cake, allowing increased filtration times before a maximum admissible pressure on the filter is reached, or before the filtration chamber becomes filled with cake. Accordingly, the present invention provides an increased filter production lifetime. This increased production lifetime results in a more efficient filtration process, and reduces costs associated with filtration, for example by reducing the need to stop production in order to clean filtration chambers. The extent of the improvement of the present invention over the prior art was unexpected. In particular, prior to the present invention it was not recognized that angular particles having a particular size distinction would provide a filter aid with improved characteristics. In addition, the filter aid of the present invention has met with considerable commercial success.

The claimed invention provides a filter aid having characteristics that are not taught, suggested or disclosed by the prior art. In particular, the angular particles of the present invention are quite different from the spheres or the irregular diatomaceous particles of the prior art. Furthermore, although parameters exist that can be used to describe the shape of the particles of the present invention, that does not lead one of skill in the art to the conclusion that the particular characteristics of the filter aid of the present invention are taught, suggested or disclosed by the prior art. Indeed, there is nothing in the prior art that teaches, suggests or

discloses particles having the angular characteristics of the present invention for use as a filter aid.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: July 17, 2003

By: 

Name: Dr. J. HERMIA

## Curriculum Vitae

**HERMIA J. J.**

Born in Liège (Belgium) 20-09-38

### Business Address:

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1348 Louvain-la-Neuve  
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### Education

Chemical Engineer 1962, University of Liège

### Career

1962-1968	Research fellow FNRS, University of Liège
1969-1972	Part-time Assistant, UCL (University catholique de Louvain)
1972-1974	Part-time Lecturer, UCL
1974-1980	Full Lecturer, UCL
1980-1988	Professor in chemical engineering, UCL
1988-	Full Professor, UCL

### Duties linked to the position inside UCL

Co-founder and chairman of the Belgian Filtration Society

Member and past-chairman of Incofilt (International Consortium of Filtration Research Groups)

Member and past-chairman of the Working Group "Filtration and Separation" of the European Federation of Chemical Engineering

Past-chairman of the "Beer Filtration Working Party" of the European Brewery Convention, Engineering and Technology Forum

Exhibit A

**Member of**

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French Filtration Society

Filtration Society (London)

American Filtration Society

American Institute of Chemical Engineers